

December 2015



*CLERAL*

*Onboard scales and mechatronic solutions*

*The future of  
OBW*



## Who is CLERAL?



Canadian Company



20 years of experience



Onboard scales and mechatronics



## Why OBW?



It is the **ONLY** way that the industry can use that allows on the spot weight readings

Substantial competitive advantage

Overweight trucks have a negative impact on road safety, road degradation, environment and fair competition.

Most fines are related to axle load distribution, not on GVW

Hi cost and scarceness of weigh bridges

Overloading of heavy goods vehicles is a significant problem

One in three checked vehicles is overloaded, often by 10 to 20%



## The evolution of onboard weighing



Using new contemporary technologies



Reliability and maintenance



Use of weight data towards mechatronics



## Evolution of OBW



Weight Data  
+  
Mechatronics  
=  
Safety



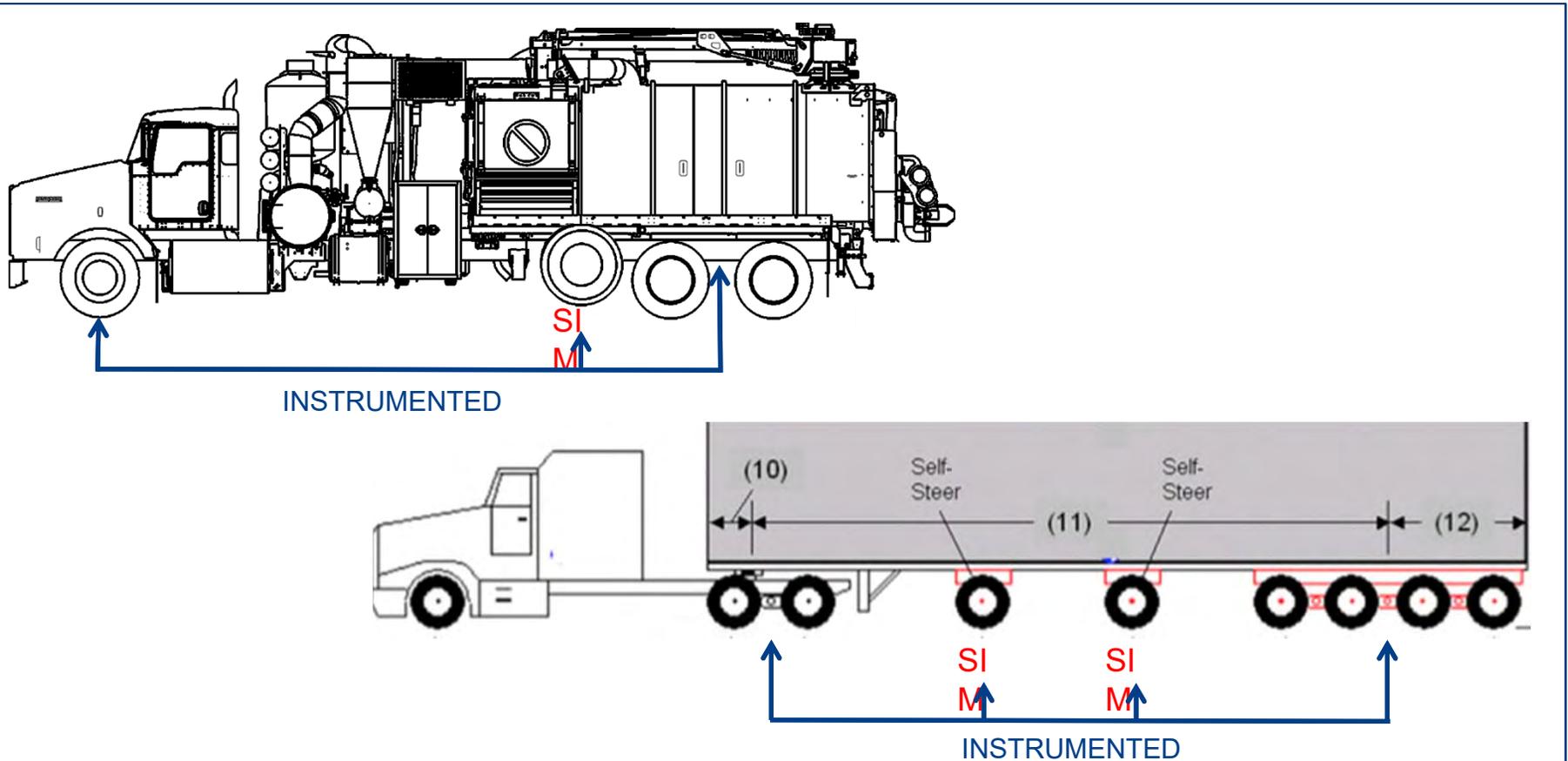
SPIF COMPLIANT



One piece body valve developed by CLERAL



## Suspension Intelligent Management «SIM»



All axles are instrumented for precise real time reading  
ALL types of suspension Air ride or Mechanical



## DOT Enforcement



A system diagnostics chart shows that the system is running according to specifications.



Vehicle information can be printed and or displayed on wireless devices (ex: Iphone, Ipad, specifically designed interfaces)



Vehicle identification and weight data can be relayed to authorities via roadside transponder



# How it works





## Educating the industry

- Let the industry know that this technology exists
- That it is not as onerous as they think  
Affordability and R.O.I.
- That it is reliable and safe
- That their equipment ultimately will last longer while avoiding fines.



## Educating law enforcement



OBW can be used for pre-selection of potential infringement

Speed, alcohol and Drugs

Vehicle condition, fatigue and traffic fluidity

Vehicles with OBW can be given incentives

Obviously need more control practices



## Conclusion



The future is in better understanding OBW and its capabilities.

Not only could they benefit the industry itself but could also reduce damages to the road infrastructures.

At the same time make the roads safer for everyone

In conclusion, the conditions for OBW to be effective, affordability and reliability are fulfilled. On-board weighing systems are a very effective tool to prevent overloading and could be fitted to all vehicles at limited cost. It is therefore recommended that Canadian DOT makes this mandatory for all new heavy goods vehicles. The after market obligations should also be considered.



## Quoted Studies

### [International Transport Forum 2010-53 countries](#)

Effective OBW systems could potentially be used in any regulatory application that involves knowledge of vehicle and axle mass, for example, road pricing based on mass and distance or access limitations based on vehicle or axle mass.

### [ACEA Heavy-duty Vehicle Weight Restrictions in the EU – Februar 2015](#)

For OBW, their potential is not only in enforcement. If installed on-board, operators and their drivers would know if their vehicles were infringing the regulations or not, and what the consequences and liabilities might be. Weight compliance checking is cumbersome and slow. A suspected vehicle is flagged and then guided to the closest available certified weighing scale. This is time-consuming and is only done when there is clear indication of substantial overloading.



## Quoted Studies

### **Comprehensive Truck Size and Weight Limits Study**

November, 2013 USDOT Federal Highway Administration.

*Although many countries in Europe and North America have explored charging vehicles based on operating axle weights and the associated pavement damage, charging for actual damage at the point of use through use of WIM or other scales becomes problematic because of the high cost of installing weight station and the poor correlation between static and dynamic axle load. The authors instead propose an on-board system consisting of dynamic axle-load measurement combined with vehicle location measuring devices (now widely known as Global Positioning Systems or GPS).*

### **International transport forum 2010**

*... commercial OBM systems [on-board mass monitoring systems] have sufficient accuracy for all types of regulatory applications, tampering can be addressed via the use of dynamic data and therefore it is possible to specify an evidentiary standard OBM system*



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Thank you for your precious time

for a safe transportation